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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/674,877

09/29/2003

Harry Schilling

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EXAMINER

LU, ZHIYU

ART UNIT

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2618

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/674,877	<b>Applicant(s)</b> SCHILLING ET AL.	
	<b>Examiner</b> ZHIYU LU	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2 and 4-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2 and 4-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

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### **DETAILED ACTION**

1. In view of the APPEAL BRIEF filed on 8/26/2009, PROSECUTION IS HEREBY REOPENED. New rejections are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Duc Nguyen/

Supervisory Patent Examiner, Art Unit 2618.

### ***Response to Arguments***

1. Applicant's arguments, see APPEAL BRIEF, filed 08/26/2009, with respect to the rejection(s) of claim(s) 2 and 8 under 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Rider (US5264795) and Meinke (US4193123).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rider (US5264795) in view of Meinke (US4193123).

Regarding claim 2, Rider teaches device for broadband transmission of digital signals between at least one first unit and at least one second unit mobile along a predetermined path relative to said first unit, via non-contacting rotary joints, wherein said first unit (100 of Figs. 5-6) comprises:

a data source for generating a serial data stream (145 of Fig. 6, column 9 lines 34-37);

a transmitter (170 of Fig. 6) for generating electrical signals from said serial data stream from said data source;

a controller (110 of Fig. 6) coupled between said data source and said transmitter for controlling said serial data stream, wherein said controller comprises:

means for storing (RAM of Fig. 7, wherein input data processed by microcontroller obviously goes through a temporary storage area) data from the serial data stream; and

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means for outputting (114, 115, 117-118 of Fig. 7) the stored data to said transmitter in accordance with the desired value of data rate or data package size (column 10 lines 3-45, programmable timer for desired rate); and  
a transmitter conductor array (20 of Fig. 5) for conducting said electrical signals generated by said transmitter;

wherein said second unit (200 of Figs. 5-6) comprises:

a receiving antenna (290 of Fig. 6) for tapping electrical signals in the near field of said transmitter conductor array;

a receiver (260 of Fig. 6) for receiving the signals tapped by said receiving antenna; and

a data sink (210 of Fig. 6) for subsequent processing of the signals received by said receiver.

Rider does not expressly disclose converting a data rate or data package size of said data source into a desired value of data rate or data package size.

However, Rider teaches said data source being from a personal computer (column 9 lines 34-37, which is digital data packet) and processing/modulating said serial data stream from said data source with a default baud rate (column 10 lines 4-45, column 12 lines 55-63). And data rate/bit rate is the product of the symbol rate (baud rate) and the number of bits encoded in each symbol. It would have been obvious to one of ordinary skill in the art to recognize that the data rate of the source of Rider does changed in the processing through the transmitter.

Meinke teaches digital-to-analog converter requiring data rate conversion between a digital information source and the converter itself (column 1 lines 12-19).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the data rate conversion taught by Meinke into the converters of Rider, in order to provide an interface between arrangements that operate at different rates.

Regarding claim 8, Rider and Meinke teach a method of broadband transmission of digital signals between at least one first unit and at least one second unit mobile along a predetermined path relative to said first unit, via non-contacting rotary joints as explained in response to claim 2 above.

Regarding claim 6, Rider and Meinke teach the limitation of claim 2.

Rider teach further comprising a micro controller is provided for controlling or diagnosing the system (Processor of Fig. 7).

Regarding claim 7, Rider and Meinke teach the limitation of claim 1.

Rider teaches wherein the system is self-learning and adapts itself dynamically to respective conditions of operation, (column 25 lines 7-40, where a tank circuit provides information for microcontroller to determine the desired operating mode for transmitter).

Regarding claim 12, Rider and Meinke teach the limitation of claim 2.

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Rider teaches further comprising a decoder (210 of Fig. 6, 611 of Fig. 14) coupled to or included within said receiver for converting a data rate or data package size of the signals received by said receiver into the data rate or data package size generated by said data source.

3. Claims 4 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rider (US Patent#5264795) in view of Meinke (USUS4193123), Richley et al. (US Patent#5437057) and Waters et al. (US Patent#6611776).

Regarding claims 4 and 9, Rider and Meinke teach the limitations of claims 2 and 8.

But, Rider and Meinke do not expressly disclose wherein the desired value is determined by a desired-value generator according to actual transmission characteristics of a data transmission path between said transmitter and said receiver.

Richley et al. teach near field coupling is employed for transferring data back and forth between stations (abstract, Figs. 4-5), which would have been obvious for one of ordinary skill in the art to incorporate into the devices of Rider and Meinke with modification of near-field transceiver taught by Richley et al., in order to enable two-way communication.

Waters et al. teach a controller is provided for controlling said data stream by signaling a desired value of data rate to said transmitter for short-range wireless communication (4 of Fig. 1, column 3 line 66 to column 4 line 15), which is to inform the transmitter data rate adjustment needed based on the characteristics of the data transmission path.

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Despite difference in wireless communication protocols, modification for communication feedback in improving communication quality would have been an obvious feature in wireless communication for one of ordinary skill in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate having controller informed of changing data rate taught by Waters et al. into the device of Rider, Meinke and Richley et al., in order to maintain or improve communication quality.

Regarding claim 10, Rider, Meinke, Richley et al., and Waters et al. teach the limitation of claim 9.

Rider, Meinke, Richley et al., and Waters et al. teach wherein said step of controlling the serial data stream comprises supplying the desired value of data rate or data package size to said transmitter as explained in response to claim 9 above.

Regarding claim 11, Rider, Meinke, Richley et al., and Waters et al. teach the limitation of claim 10.

Rider, Meinke, Richley et al., and Waters et al. teach wherein said step of controlling the serial data stream comprises storing data from the serial data stream if the desired data rate is lower than a rate at which the serial data stream is generated by the data source in said generating step (obvious because a temporary storing is needed for data rate conversion)



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4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rider (US Patent#5264795) in view of Meinke (US4193123), Richley et al. (US Patent#5437057) and Marchetto et al. (US Patent#5914959).

Regarding claim 5, Rider and Meinke teach the limitation of claim 2.

But, Rider and Meinke do not expressly disclose further comprising an analyzer coupled between said receiver and said data sink, wherein said analyzer is configured for signaling incorrectly transmitted data to said controller by means of an additional transmission path, and wherein said controller is configured for repeating said incorrectly transmitted data packages upon request by said analyzer.

Richley et al. teach near field coupling is employed for transferring data back and forth between stations (abstract, Figs. 4-5), which would have been obvious for one of ordinary skill in the art to incorporate into the devices of Rider and Meinke with modification of near-field transceiver taught by Richley et al., in order to enable two-way communication.

Marchetto et al. teach an analyzer coupled between said receiver and said data sink, wherein said analyzer is configured for signaling incorrectly transmitted data to said controller by means of an additional transmission path, and wherein said controller is configured for repeating said incorrectly transmitted data packages upon request by said analyzer (abstract, Fig. 2, column 1 line 57 to column 3 line 30).

Despite difference in wireless communication protocols, requesting retransmission for detecting error data for completing data reception would have been an obvious feature in wireless communication for one of ordinary skill in the art.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate having means for requesting retransmission taught by Machetto et al. into the device of Rider, Meinke, and Richley et al., in order to provide resilient communication.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZHIYU LU whose telephone number is (571)272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on (571) 272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zhiyu Lu  
Examiner  
Art Unit 2618

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Examiner, Art Unit 2618

December 3, 2009

/Duc Nguyen/

Supervisory Patent Examiner, Art Unit 2618